

Date: Sun, 14 Nov 93 05:45:42 PST  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #1343  
To: Info-Hams

Info-Hams Digest                      Sun, 14 Nov 93                      Volume 93 : Issue 1343

Today's Topics:

SAREX Keps & Update 10/28 (3 msgs)  
What do I do now/

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

-----  
Date: 14 Nov 93 10:35:15 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: SAREX Keps & Update 10/28  
To: info-hams@ucsd.edu

R:931114/0534Z @:F6CNB.#SETX.TX.USA.NA [SugarLand] #:64729 Z:77478  
R:931113/1451Z @:VK3BBS.VIC.AUS.OC [St Albans] #:110211 Z:3021 FBB5.15  
R:931112/1442Z @:VK4DGQ.QLD.AUS.OC [Brisbane] #:39039 \$:29047\_W70EK  
R:931112/0503z 39129@KE7KD.#NONEV.NV.USA.NOAM [RENO, NV.]  
R:931107/0432z 11312@N7KXI.UT.USA.NA  
R:931107/0111z 17783@KG7FC.UT.USA.NA [DATA HUB UT]  
R:931104/1920z 10535@N7MLR.UT.USA.NA  
R:931104/1123z 52019@N0LEU.#NWCO.CO.USA.NOAM  
R:931103/1739z 59375@KT0H.#NECO.CO.USA [DATA HUB CO]  
R:931103/1716Z @:W0RA.#SECO.CO.USA.NA [YODER] FBB5.14d #:82723  
R:931103/1302Z @:W7GCI.WA.USA.NA [Tacoma] #:35682 Z:98499 FBB5.15  
R:931103/1212Z @:WA7BHH.WA.USA.NA [Tacoma] #:13575 Z:98465 FBB5.15  
R:931103/1132 6215@WB7QEU.WA.USA.NA  
R:931103/1016 7983@WA7SJN.WA.USA.NA  
R:931103/1003 1121@W0RLI.OR.USA.NOAM  
R:931103/0545 37550@N7DXT.#EUGEN.OR.USA.NA

R:931103/0454 49935@WB7VMS.#MURPH.OR.USA.NOAM

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29047 ; Wed, 03 Nov 93 01:09:32 GMT  
Date: Wed, 03 Nov 93 01:09:40 UTC  
Message-Id: <29041\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29041 ; Tue, 02 Nov 93 21:42:27 GMT  
Date: Tue, 02 Nov 93 21:42:59 UTC  
Message-Id: <28985\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28985 ; Tue, 02 Nov 93 20:47:06 GMT  
Date: Tue, 02 Nov 93 20:47:48 UTC  
Message-Id: <28973\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28973 ; Tue, 02 Nov 93 19:58:01 GMT  
Date: Tue, 02 Nov 93 19:58:49 UTC  
Message-Id: <28968\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28968 ; Tue, 02 Nov 93 18:43:20 GMT  
Date: Tue, 02 Nov 93 18:44:09 UTC  
Message-Id: <28942\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org

To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28942 ; Tue, 02 Nov 93 17:43:53 GMT  
Date: Tue, 02 Nov 93 17:44:47 UTC  
Message-Id: <28937\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28937 ; Tue, 02 Nov 93 15:43:49 GMT  
Date: Tue, 02 Nov 93 15:44:50 UTC  
Message-Id: <28936\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28936 ; Tue, 02 Nov 93 14:43:54 GMT  
Date: Tue, 02 Nov 93 14:44:51 UTC  
Message-Id: <28935\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28935 ; Tue, 02 Nov 93 13:43:53 GMT  
Date: Tue, 02 Nov 93 13:44:50 UTC  
Message-Id: <28933\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28933 ; Tue, 02 Nov 93 12:42:37 GMT  
Date: Tue, 02 Nov 93 12:43:53 UTC

Message-Id: <28932\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHHB%W70EK@WD4ECK.AMPR.ORG>  
id 28932 ; Tue, 02 Nov 93 12:09:45 GMT  
X-Forwarded-To: W70EK  
Date: 28 Oct 93 19:00:00 UTC  
Message-Id: <931028050312@w7oek.bbs>  
From: abfhhb@wa8ure.#swmi.mi.usa.na  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

R:931102/0810z 28885@W70EK.OR.USA.NA  
R:931102/0121 49595@WB7VMS.#MURPH.OR.USA.NOAM  
R:931101/1449 37097@N7DXT.#EUGEN.OR.USA.NA  
R:931101/0530 4700@KB7DBD.OR.USA.NA  
R:931101/1218 9138@KB7KBT.OR.USA.NA  
R:931101/1152 6500@KA7AGH.OR.USA.NA  
R:931101/1156 23351@W0RLI.OR.USA.NA  
R:931101/1128 7291@WA7SJN.WA.USA.NA  
R:931101/0025 12848@WA7BHH.WA.USA.NA  
R:931101/0000 35118@W7GCI.WA.USA.NA  
R:931030/1514 47346@N8GTC.#CIN.IN.USA.NOAM  
R:931030/0718 29215@W90J.IN.USA.NA  
R:931030/0652 22073@N5CEC.IN.USA.NA  
R:931030/0540 21727@KK9G.#CEIN.IN.USA.NA  
R:931030/0537 35453@N5AAA.#CEIN.IN.USA.NA  
R:931029/1256 26400@KD9LP.#NCIN.IN.USA.NA  
R:931029/0636 15967@NU9H.#NWIN.IN.USA.NA  
R:931028/1900 36038@WA8URE.#SWMI.MI.USA.NA

SB SAREX @ AMSAT \$STS-58.025  
SAREX Keps & Update: 10/28

Thursday 10/28/93 @ 08:00 UTC

The last school group contact was completed yesterday. The Portsmouth HS in Portsmouth, New Hampshire had a telebridge contact using stations in California (Ralph Warner, N6MNN) and Texas (Bob Douglas, W5GEL). The students asked 5 questions during this bridge contact.

Hams across the U.S. and around the world continue to work the Shuttle Columbia on both voice and packet. Moreover, the completion of school

group contacts has cleared several school backup passes for possible general QSO opportunities. While the SAREX Working Group cannot fully guarantee availability, there is a high probability that the STS-58 crew will be ready to take general calls over the continental U.S. on these passes. Two of these "scheduled" passes remain. These include orbit 178 at MET 11 days 1 hour 42 minutes (10/29 at 16:35 UTC) and orbit 192 at MET 11 days 22 hours and 29 minutes (10/30 at 13:22 UTC). Please note that the astronauts operated voice during yesterday's "scheduled" pass which occurred on 10/27 at 14:59 UTC (Orbit 145). Also note that hams on the ground heard or worked the Shuttle Columbia crew on several other orbits yesterday.

Element set GSFC-031, generated by Ron Parise, WA4SIR, is the official SAREX set for today. Please note that there is only a six second difference between element set GSFC-025 (released two days ago) and element set GSFC-031.

STS-58

```
1 22869U 93065A    93300.17699070 0.00133671  99048-5  24183-3 0   318
2 22869  39.0252  71.9896 0012817  34.2105 325.9529 16.00500857 1383
```

Satellite: STS-58

Catalog number: 22869

Epoch time: 93300.17699070 (27 OCT 93 04:14:51.\*\* UTC)

Element set: GSFC-031

Inclination: 39.0252 deg

RA of node: 71.9896 deg Space Shuttle Flight STS-58

Eccentricity: 0.0012817 Keplerian Elements

Arg of perigee: 34.2105 deg

Mean anomaly: 325.9529 deg

Mean motion: 16.00500857 rev/day Semi-major Axis: 6651.1630 Km

Decay rate: 0.13E-02 rev/day\*2 Apogee Alt: 281.30 Km

Epoch rev: 138 Perigee Alt: 264.25 Km

NOTE - This element set is based on NORAD element set # 031.

The spacecraft has been propagated to the next ascending node, and the orbit number has been adjusted to bring it into agreement with the NASA numbering convention.

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

-----  
Date: 14 Nov 93 10:44:00 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: SAREX Keps & Update 10/28  
To: info-hams@ucsd.edu

R:931114/0552Z @:F6CNB.#SETX.TX.USA.NA [SugarLand] #:64795 Z:77478  
R:931113/1456Z @:VK3BBS.VIC.AUS.OC [St Albans] #:110212 Z:3021 FBB5.15  
R:931112/1444Z @:VK4DGQ.QLD.AUS.OC [Brisbane] #:39041 \$:29050\_W70EK  
R:931112/0459z 39127@KE7KD.#NONEV.NV.USA.NOAM [RENO, NV.]  
R:931107/0451z 11314@N7KXI.UT.USA.NA  
R:931106/0721z 17716@KG7FC.UT.USA.NA [DATA HUB UT]  
R:931104/2120z 10537@N7MLR.UT.USA.NA  
R:931104/1305z 52021@N0LEU.#NWC0.CO.USA.NOAM  
R:931103/1735z 59374@KT0H.#NECO.CO.USA [DATA HUB CO]  
R:931103/1708Z @:W0RA.#SECO.CO.USA.NA [YODER] FBB5.14d #:82722  
R:931103/1257Z @:W7GCI.WA.USA.NA [Tacoma] #:35681 Z:98499 FBB5.15  
R:931103/1205Z @:WA7BHH.WA.USA.NA [Tacoma] #:13574 Z:98465 FBB5.15  
R:931103/1123 6214@WB7QEU.WA.USA.NA  
R:931103/1009 7982@WA7SJJN.WA.USA.NA  
R:931103/0959 1118@W0RLI.OR.USA.NOAM  
R:931103/0516 37547@N7DXT.#EUGEN.OR.USA.NA  
R:931103/0445 49934@WB7VMS.#MURPH.OR.USA.NOAM

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29050 ; Wed, 03 Nov 93 02:01:26 GMT  
Date: Wed, 03 Nov 93 02:01:50 UTC  
Message-Id: <29047\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 29047 ; Wed, 03 Nov 93 01:09:32 GMT  
Date: Wed, 03 Nov 93 01:09:40 UTC  
Message-Id: <29041\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 29041 ; Tue, 02 Nov 93 21:42:27 GMT  
Date: Tue, 02 Nov 93 21:42:59 UTC  
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From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28985 ; Tue, 02 Nov 93 20:47:06 GMT  
Date: Tue, 02 Nov 93 20:47:48 UTC  
Message-Id: <28973\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 28973 ; Tue, 02 Nov 93 19:58:01 GMT  
Date: Tue, 02 Nov 93 19:58:49 UTC  
Message-Id: <28968\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 28968 ; Tue, 02 Nov 93 18:43:20 GMT  
Date: Tue, 02 Nov 93 18:44:09 UTC  
Message-Id: <28942\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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Message-Id: <28937\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 28937 ; Tue, 02 Nov 93 15:43:49 GMT  
Date: Tue, 02 Nov 93 15:44:50 UTC  
Message-Id: <28936\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org

Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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id 28936 ; Tue, 02 Nov 93 14:43:54 GMT  
Date: Tue, 02 Nov 93 14:44:51 UTC  
Message-Id: <28935\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
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From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28933 ; Tue, 02 Nov 93 12:42:37 GMT  
Date: Tue, 02 Nov 93 12:43:53 UTC  
Message-Id: <28932\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 28932 ; Tue, 02 Nov 93 12:09:45 GMT  
X-Forwarded-To: W70EK  
Date: 28 Oct 93 19:00:00 UTC  
Message-Id: <931028050312@w7oek.bbs>  
From: abfhb@wa8ure.#swmi.mi.usa.na  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

R:931102/0810z 28885@W70EK.OR.USA.NA  
R:931102/0121 49595@WB7VMS.#MURPH.OR.USA.NOAM  
R:931101/1449 37097@N7DXT.#EUGEN.OR.USA.NA  
R:931101/0530 4700@KB7DBD.OR.USA.NA



R:931101/1218 9138@KB7KBT.0R.USA.NA  
 R:931101/1152 6500@KA7AGH.0R.USA.NA  
 R:931101/1156 23351@W0RLI.0R.USA.NA  
 R:931101/1128 7291@WA7S3N.WA.USA.NA  
 R:931101/0025 12848@WA7BHH.WA.USA.NA  
 R:931101/0000 35118@W7GCI.WA.USA.NA  
 R:931030/1514 47346@N8GTC.#CIN.IN.USA.NOAM  
 R:931030/0718 29215@W90J.IN.USA.NA  
 R:931030/0652 22073@N5CEC.IN.USA.NA  
 R:931030/0540 21727@KK9G.#CEIN.IN.USA.NA  
 R:931030/0537 35453@N5AAA.#CEIN.IN.USA.NA  
 R:931029/1256 26400@KD9LP.#NCIN.IN.USA.NA  
 R:931029/0636 15967@NU9H.#NWIN.IN.USA.NA  
 R:931028/1900 36038@WA8URE.#SWMI.MI.USA.NA

SB SAREX @ AMSAT \$STS-58.025  
 SAREX Keps & Update: 10/28

Thursday 10/28/93 @ 08:00 UTC

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Element set GSFC-031, generated by Ron Parise, WA4SIR, is the official SAREX set for today. Please note that there is only a six second difference between element set GSFC-025 (released two days ago) and element set GSFC-031.

STS-58

1	22869U	93065A	93300.17699070	0.00133671	99048-5	24183-3	0	318
2	22869	39.0252	71.9896	0012817	34.2105	325.9529	16.00500857	1383

Satellite: STS-58  
Catalog number: 22869  
Epoch time: 93300.17699070 (27 OCT 93 04:14:51.\*\* UTC)  
Element set: GSFC-031  
Inclination: 39.0252 deg  
RA of node: 71.9896 deg Space Shuttle Flight STS-58  
Eccentricity: 0.0012817 Keplerian Elements  
Arg of perigee: 34.2105 deg  
Mean anomaly: 325.9529 deg  
Mean motion: 16.00500857 rev/day Semi-major Axis: 6651.1630 Km  
Decay rate: 0.13E-02 rev/day\*2 Apogee Alt: 281.30 Km  
Epoch rev: 138 Perigee Alt: 264.25 Km

NOTE - This element set is based on NORAD element set # 031.  
The spacecraft has been propagated to the next ascending  
node, and the orbit number has been adjusted to bring it  
into agreement with the NASA numbering convention.

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

-----  
Date: 14 Nov 93 10:46:37 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: SAREX Keps & Update 10/28  
To: info-hams@ucsd.edu

R:931114/0557Z @:F6CNB.#SETX.TX.USA.NA [SugarLand] #:64808 Z:77478  
R:931113/1501Z @:VK3BBS.VIC.AUS.OC [St Albans] #:110215 Z:3021 FBB5.15  
R:931112/1446Z @:VK4DGQ.QLD.AUS.OC [Brisbane] #:39042 \$:29260\_W70EK  
R:931112/0448z 39126@KE7KD.#NONEV.NV.USA.NOAM [RENO, NV.]  
R:931107/0501z 11316@N7KXI.UT.USA.NA  
R:931106/0720z 17715@KG7FC.UT.USA.NA [DATA HUB UT]  
R:931105/1921z 10560@N7MLR.UT.USA.NA  
R:931105/1126z 52057@N0LEU.#NWC0.CO.USA.NOAM  
R:931105/1618z 60176@KT0H.#NECO.CO.USA [DATA HUB CO]  
R:931105/1603Z @:W0RA.#SECO.CO.USA.NA [YODER] FBB5.14d #:83463  
R:931105/1319Z @:W7GCI.WA.USA.NA [Tacoma] #:36038 Z:98499 FBB5.15  
R:931105/1240Z @:WA7BHH.WA.USA.NA [Tacoma] #:14070 Z:98465 FBB5.15  
R:931105/1143 6692@WB7QEU.WA.USA.NA  
R:931105/0837 8578@WA7SJM.WA.USA.NA  
R:931105/0826 1818@W0RLI.OR.USA.NOAM  
R:931105/0414 37948@N7DXT.#EUGEN.OR.USA.NA  
R:931105/0300 50289@WB7VMS.#MURPH.OR.USA.NOAM

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29260 ; Thu, 04 Nov 93 05:04:57 GMT  
Date: Thu, 04 Nov 93 05:01:32 UTC  
Message-Id: <29256\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHHB%W70EK@WD4ECK.AMPR.ORG>

id 29256 ; Thu, 04 Nov 93 03:46:32 GMT  
Date: Thu, 04 Nov 93 03:44:57 UTC  
Message-Id: <29255\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHHB%W70EK@WD4ECK.AMPR.ORG>

id 29255 ; Thu, 04 Nov 93 02:45:47 GMT  
Date: Thu, 04 Nov 93 02:44:45 UTC  
Message-Id: <29254\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHHB%W70EK@WD4ECK.AMPR.ORG>

id 29254 ; Thu, 04 Nov 93 01:45:29 GMT  
Date: Thu, 04 Nov 93 01:44:47 UTC  
Message-Id: <29253\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHHB%W70EK@WD4ECK.AMPR.ORG>

id 29253 ; Thu, 04 Nov 93 00:46:29 GMT  
Date: Thu, 04 Nov 93 00:45:06 UTC  
Message-Id: <29249\_w7oek@w7oek.bbs>  
From: abfhhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29249 ; Thu, 04 Nov 93 00:15:42 GMT  
Date: Thu, 04 Nov 93 00:15:11 UTC  
Message-Id: <29228\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29228 ; Wed, 03 Nov 93 22:47:23 GMT  
Date: Wed, 03 Nov 93 22:46:25 UTC  
Message-Id: <29207\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29207 ; Wed, 03 Nov 93 21:45:05 GMT  
Date: Wed, 03 Nov 93 21:44:35 UTC  
Message-Id: <29164\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29164 ; Wed, 03 Nov 93 20:56:01 GMT  
Date: Wed, 03 Nov 93 20:55:40 UTC  
Message-Id: <29150\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29150 ; Wed, 03 Nov 93 18:45:47 GMT  
Date: Wed, 03 Nov 93 18:45:40 UTC  
Message-Id: <29148\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28

X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29148 ; Wed, 03 Nov 93 18:03:46 GMT  
Date: Wed, 03 Nov 93 18:03:22 UTC  
Message-Id: <29147\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29147 ; Wed, 03 Nov 93 17:12:03 GMT  
Date: Wed, 03 Nov 93 17:11:44 UTC  
Message-Id: <29136\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29136 ; Wed, 03 Nov 93 15:44:49 GMT  
Date: Wed, 03 Nov 93 15:44:44 UTC  
Message-Id: <29134\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
id 29134 ; Wed, 03 Nov 93 14:45:08 GMT  
Date: Wed, 03 Nov 93 14:44:47 UTC  
Message-Id: <29132\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>  
  
id 29132 ; Wed, 03 Nov 93 13:44:32 GMT  
Date: Wed, 03 Nov 93 13:44:45 UTC  
Message-Id: <29131\_w7oek@w7oek.bbs>

From: abfhib%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29131 ; Wed, 03 Nov 93 12:44:39 GMT  
Date: Wed, 03 Nov 93 12:44:44 UTC  
Message-Id: <29126\_w7oek@w7oek.bbs>  
From: abfhib%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29126 ; Wed, 03 Nov 93 11:44:24 GMT  
Date: Wed, 03 Nov 93 11:44:43 UTC  
Message-Id: <29125\_w7oek@w7oek.bbs>  
From: abfhib%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29125 ; Wed, 03 Nov 93 10:44:31 GMT  
Date: Wed, 03 Nov 93 10:44:47 UTC  
Message-Id: <29117\_w7oek@w7oek.bbs>  
From: abfhib%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29117 ; Wed, 03 Nov 93 09:43:27 GMT  
Date: Wed, 03 Nov 93 09:43:46 UTC  
Message-Id: <29091\_w7oek@w7oek.bbs>  
From: abfhib%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29091 ; Wed, 03 Nov 93 08:56:04 GMT  
Date: Wed, 03 Nov 93 08:55:59 UTC  
Message-Id: <29080\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29080 ; Wed, 03 Nov 93 07:45:09 GMT  
Date: Wed, 03 Nov 93 07:45:11 UTC  
Message-Id: <29079\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29079 ; Wed, 03 Nov 93 07:03:53 GMT  
Date: Wed, 03 Nov 93 07:03:31 UTC  
Message-Id: <29066\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29066 ; Wed, 03 Nov 93 05:43:31 GMT  
Date: Wed, 03 Nov 93 05:44:04 UTC  
Message-Id: <29062\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29062 ; Wed, 03 Nov 93 02:45:25 GMT  
Date: Wed, 03 Nov 93 02:46:01 UTC  
Message-Id: <29050\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29050 ; Wed, 03 Nov 93 02:01:26 GMT  
Date: Wed, 03 Nov 93 02:01:50 UTC  
Message-Id: <29047\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29047 ; Wed, 03 Nov 93 01:09:32 GMT  
Date: Wed, 03 Nov 93 01:09:40 UTC  
Message-Id: <29041\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 29041 ; Tue, 02 Nov 93 21:42:27 GMT  
Date: Tue, 02 Nov 93 21:42:59 UTC  
Message-Id: <28985\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B



Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28985 ; Tue, 02 Nov 93 20:47:06 GMT  
Date: Tue, 02 Nov 93 20:47:48 UTC  
Message-Id: <28973\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28973 ; Tue, 02 Nov 93 19:58:01 GMT  
Date: Tue, 02 Nov 93 19:58:49 UTC  
Message-Id: <28968\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28968 ; Tue, 02 Nov 93 18:43:20 GMT  
Date: Tue, 02 Nov 93 18:44:09 UTC  
Message-Id: <28942\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28942 ; Tue, 02 Nov 93 17:43:53 GMT  
Date: Tue, 02 Nov 93 17:44:47 UTC  
Message-Id: <28937\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28937 ; Tue, 02 Nov 93 15:43:49 GMT  
Date: Tue, 02 Nov 93 15:44:50 UTC  
Message-Id: <28936\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28936 ; Tue, 02 Nov 93 14:43:54 GMT  
Date: Tue, 02 Nov 93 14:44:51 UTC  
Message-Id: <28935\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28935 ; Tue, 02 Nov 93 13:43:53 GMT  
Date: Tue, 02 Nov 93 13:44:50 UTC  
Message-Id: <28933\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28933 ; Tue, 02 Nov 93 12:42:37 GMT  
Date: Tue, 02 Nov 93 12:43:53 UTC  
Message-Id: <28932\_w7oek@w7oek.bbs>  
From: abfhb%w7oek@wd4eck.ampr.org  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

Received: from WD4ECK.AMPR.ORG by W70EK.AMPR.ORG with SMTP originator  
<ABFHB%W70EK@WD4ECK.AMPR.ORG>

id 28932 ; Tue, 02 Nov 93 12:09:45 GMT  
X-Forwarded-To: W70EK

Date: 28 Oct 93 19:00:00 UTC

Message-Id: <931028050312@w70ek.bbs>  
From: abfhhb@wa8ure.#swmi.mi.usa.na  
To: ans@amsat.org  
Subject: SAREX Keps & Update 10/28  
X-BBS-Msg-Type: B

R:931102/0810z 28885@W70EK.OR.USA.NA  
R:931102/0121 49595@WB7VMS.#MURPH.OR.USA.NOAM  
R:931101/1449 37097@N7DXT.#EUGEN.OR.USA.NA  
R:931101/0530 4700@KB7DBD.OR.USA.NA  
R:931101/1218 9138@KB7KBT.OR.USA.NA  
R:931101/1152 6500@KA7AGH.OR.USA.NA  
R:931101/1156 23351@W0RLI.OR.USA.NA

R:931101/1128 7291@WA7SJN.WA.USA.NA  
R:931101/0025 12848@WA7BHH.WA.USA.NA  
R:931101/0000 35118@W7GCI.WA.USA.NA  
R:931030/1514 47346@N8GTC.#CIN.IN.USA.NOAM  
R:931030/0718 29215@W90J.IN.USA.NA

R:931030/0652 22073@N5CEC.IN.USA.NA  
R:931030/0540 21727@KK9G.#CEIN.IN.USA.NA  
R:931030/0537 35453@N5AAA.#CEIN.IN.USA.NA  
R:931029/1256 26400@KD9LP.#NCIN.IN.USA.NA  
R:931029/0636 15967@NU9H.#NWIN.IN.USA.NA  
R:931028/1900 36038@WA8URE.#SWMI.MI.USA.NA

SB SAREX @ AMSAT \$STS-58.025  
SAREX Keps & Update: 10/28

Thursday 10/28/93 @ 08:00 UTC

The last school group contact was completed yesterday. The Portsmouth HS in Portsmouth, New Hampshire had a telebridge contact using stations in California (Ralph Warner, N6MNN) and Texas (Bob Douglas, W5GEL). The students asked 5 questions during this bridge contact.

Hams across the U.S. and around the world continue to work the Shuttle Columbia on both voice and packet. Moreover, the completion of school

group contacts has cleared several school backup passes for possible general QSO opportunities. While the SAREX Working Group cannot fully guarantee availability, there is a high probability that the STS-58 crew will be ready to take general calls over the continental U.S. on these passes. Two of these "scheduled" passes remain. These include orbit 178 at MET 11 days 1 hour 42 minutes (10/29 at 16:35 UTC) and orbit 192 at MET 11 days 22 hours and 29 minutes (10/30 at 13:22 UTC). Please note that the astronauts operated voice during yesterday's "scheduled" pass which occurred on 10/27 at 14:59 UTC (Orbit 145). Also note that hams on

the ground heard or worked the Shuttle Columbia crew on several other orbits yesterday.

Element set GSFC-031, generated by Ron Parise, WA4SIR, is the official SAREX set for today. Please note that there is only a six second difference between element set GSFC-025 (released two days ago) and element set GSFC-031.

STS-58

```
1 22869U 93065A    93300.17699070 0.00133671  99048-5  24183-3 0   318
2 22869  39.0252  71.9896 0012817  34.2105 325.9529 16.00500857 1383
```

Satellite: STS-58

Catalog number: 22869

Epoch time:	93300.17699070	(27 OCT 93 04:14:51.** UTC)
Element set:	GSFC-031	
Inclination:	39.0252 deg	
RA of node:	71.9896 deg	Space Shuttle Flight STS-58
Eccentricity:	0.0012817	Keplerian Elements
Arg of perigee:	34.2105 deg	
Mean anomaly:	325.9529 deg	
Mean motion:	16.00500857 rev/day	Semi-major Axis: 6651.1630 Km
Decay rate:	0.13E-02 rev/day*2	Apogee Alt: 281.30 Km
Epoch rev:	138	Perigee Alt: 264.25 Km

NOTE - This element set is based on NORAD element set # 031.

The spacecraft has been propagated to the next ascending node, and the orbit number has been adjusted to bring it into agreement with the NASA numbering convention.

Submitted by Frank H. Bauer, KA3HDO for the SAREX Working Group

-----  
Date: 14 Nov 93 12:05:40 GMT

From: ogicse!uwm.edu!cs.utexas.edu!math.ohio-state.edu!magnus.acs.ohio-state.edu!  
wvanhorn@network.ucsd.edu  
Subject: What do I do now/  
To: info-hams@ucsd.edu

In article <2c46b1\$hl4@crcnis1.unl.edu> mcduffie@unlinfo.unl.edu (Gary McDuffie Sr) writes:

>drenze@icaen.uiowa.edu (Douglas J Renze) writes:

>

>>Well, I'm almost ready to get on the air HF-wise for my first time. I've  
>>got my random-wire tuner, a tranceiver, a random wire, cables to connect it  
>>all...all I lack at the minute is a counterpoise (well, multiple counterpoises  
>>for the 2-3 bands I want to get on to) and an SWR meter, which I should be  
>>getting in a few days.

>> Question: Now what? I don't have a clue about what the controls  
>>on the front of my trusty old HW-101 do (what's a Final? What's a Drier  
>>erps...Driver Preselector?). How do I regulate my power output? In short,  
>>what in the world do I do?

>> The manual doesn't give me any help, and I don't seem to be able to  
>>find anything which tells me just how to tweak everything and get on the air!!!

>

>>Any help?

>

>>Peace es 73,

>

>>Doug NOYVW

>

>Now, if that doesn't say something about the current licensing  
>situation, nothing will.

>

>Gary

Gary: What does your supercilious answer say about current attitudes  
of experienced hams toward newcomers?

Doug: Welcome to ham radio!

Before you do anything else, find an "Elmer". That is a term  
describing an old-timer in ham radio who is always interested in  
helping newcomers to the ham world. In spite of Gary's ill-tempered  
reply, you will find plenty of willing helpers to get you started.

I have held my call for 53 years, but I am not so forgetful (yet):-)  
not to remember how green I was when I started!

Surely there are lots of hams at the U. of Nebraska! Ask around.

73 & good luck! Van - W8UOF

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End of Info-Hams Digest V93 #1343

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